Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
	)	
Amendment of Section 73.202(b),	)	MM Docket No. 99-94
Table of Allotments,	)	RM-9532
FM Broadcast Stations.	)	
(Hinton, Iowa)	)	

To: Chief, Allocations Branch
Policy and Rules Division
Mass Media Bureau

SUPPLEMENT TO COMMENTS AND COUNTER-PROPOSAL

Sunrise Broadcasting of Nebraska, Inc. ("Sunrise"), licensee of KISP(FM), Blair, Nebraska, by its attorneys, and pursuant to Section 1.420(d) of the Commission's rules and the *Notice of Proposed Rule Making*, DA 99-580 (Released March 26, 1999), hereby submits the attached Engineering Supplement to its May 10, 1999, "Comments and Counter-Proposal" in this proceeding. This supplements Sunrise's requests that the Commission amend the FM Table of Allotments to delete Channel 268C3 from Blair, Nebraska, to add Channel 267C2 at Whiting, Iowa, and to add Channel 268A at Underwood, Iowa, and that the Commission modify the license for KISP(FM) to specify operation on Channel 267C2 at Whiting, Iowa. The Engineering Supplement provides information about additional reception service provided by the Whiting facility and a comparison of the populations served by the Sunrise Counter-Proposal relative to the Hinton, Iowa, proposal.

Respectfully submitted,

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May 17, 1999

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ENGINEERING SUPPLEMENT

PREPARED ON BEHALF OF

SUNRISE BROADCASTING OF NEBRASKA, INC.

IN SUPPORT OF

REALLOTMENT OF KISP(FM)

TO

WHITING, IA FM CHANNEL 267C2*

* Includes Two Proposals:
  1. KISP(FM) at Whiting, IA 267C2
  2. New FM at Underwood, IA 268A

Prepared: May 14, 1999

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ENGINEERING SUPPLEMENT

Sunrise Broadcasting of Nebraska, Inc.
KISP(FM) Support for Reallotment to Whiting, IA Channel 267C2

I. INTRODUCTION

1. On May 10, 1999, Sunrise Broadcasting of Nebraska, Inc. ("Sunrise") filed comments and a counterproposal to a FM rule-making proposal to add Hinton, Iowa, channel 267A (RM-9532 of the FCC's *Notice of Proposed Rule Making*, DA 99-580, released March 26, 1999). Specifically, Sunrise's May 10th filing proposes the following counterproposal to RM-9532:

a. Allot channel 267C2 at Whiting (IA) as that communities's first local aural service, delete channel 268C3 from Blair (NE), and modify the license for KISP(FM) to specify operation on channel 267C2 at Whiting (IA);

b. Allot channel 268A at Underwood (IA) as that community's first local aural service.

2. As further support for the Sunrise Counterproposal, this Engineering Supplement provides the Commission with the following:

a. A study demonstrating that less than five other full-time aural services are available to a portion of the "gain area" which is predicted to result by the re-allotment of KISP(FM) from Blair, Nebraska, channel 268C3 (hereafter "Blair 268C3") to Whiting, Iowa, channel 267C2 (hereafter "Whiting 267C2")[1];

[1] Sunrise's May 10th filing includes a study demonstrating that the proposed KISP(FM) "loss area" is completely served by at least five other fulltime aural services.

b. A study which determines the population (based upon 1990 U.S. Census data) located within the 60 dBu and 70 dBu (F50,50) service contours of the Hinton, Iowa, channel 267A proposal, and a comparison of this population with that of the Sunrise Counterproposal[2].

II. OTHER SERVICES STUDY OF WHITING 267C2 GAIN AREA

3. Sunrise proposes to migrate KISP(FM) from Blair 268C3 to Whiting 267C2. In Sunrise's May 10th filing, a showing was made which demonstrates that the proposed "loss area" (the 60 dBu service contour area of the licensed Blair 267C3 facility which does not overlap with the 60 dBu service contour area of the assumed Whiting 267C3 facility) will be completely served by at least five other fulltime aural services. In this section, Sunrise further demonstrates that a portion of the proposed "gain area" (the 60 dBu service contour area of the assumed Whiting 267C3 facility which does not overlap with the 60 dBu service contour area of the licensed Blair 267C3 facility) will not be served by at least five other fulltime aural services. (This study of other fulltime aural services to the proposed Whiting 276C2 "gain area" is hereafter referred to as the "Gain Area Other Services Study".)

4. Figure 1, attached, includes a tabulation of the predicted 60 dBu F(50,50) service contour distances for a maximum FM Class C2 omnidirectional transmit facility which is located at the Whiting 267C2 reference site (hereafter referred to as the

[2] Sunrise's May 10th filing includes similar population studies for the Blair 268C3, Whiting 267C2 and Underwood 267A facilities.

"Whiting Coverage"). Figure 2, attached, includes a tabulation of the predicted 60 dBu F(50,50) service contour distances for the licensed Blair 268C3 facility (hereafter referred to as the "Blair Coverage"). (The Whiting Coverage and Blair Coverage shown here are the same as the 60 dBu service contour coverages used in the Sunrise May 10th filing.) Figure 3, attached, is a map which shows the 60 dBu service contours for both the Whiting 267C2 and Blair 268C3 facilities, and identifies the proposed gain and loss area.

5. For the Gain Area Other Services Study, all commercial FM and fulltime AM stations located within 150 kilometers of the Whiting reference site (N 42° 16' 20"; W 96° 02' 27") are considered as potential fulltime aural services. The applicable service coverage for each fulltime aural service has been determined for the different types of aural services in the following manner:

a. For a commercial Class C FM station, the 60 dBu (F50,50) service contour as determined using the licensed or authorized facilities;

b. For commercial non-Class C FM stations, the 60 dBu (F50,50) service contour as determined using the maximum-allowed facilities determined for the station's transmitter site;

c. For Class A AM stations, the 0.5 mV/m groundwave contour as determined using the licensed or authorized daytime or nighttime (whichever is smaller) facilities;

d. For non-Class A AM stations, the nighttime interference-free contour as determined using the licensed or authorized nighttime facilities.

6. Figure 4, attached, is a table listing the authorized and licensed commercial FM and fulltime AM stations which have been used to define the extent of other fulltime aural services to the Whiting 267C2 gain area[3]. (Appendix A, attached, includes coverage contour tabulations for each station listed on Figure 4.) Figure 5, attached, is a map which graphically demonstrates the results of the Gain Area Other Services Study. As demonstrated by Figure 5, a portion of the gain area located near the eastern edge of the Whiting Coverage is predicted to receive only four other fulltime aural services -- and this area is considered underserved. Figure 6, attached, is a magnification of the underserved area[4]. The population within the underserved area (based on 1990 U.S. Census data) is 491 persons.

III. HINTON 267A POPULATION STUDY AND COMPARISON

7. As mentioned in Section I, the Sunrise Counterproposal has been submitted to the FCC as an alternative to the proposed rule-making to add FM channel 267A to Hinton, Iowa (hereafter referred to as "Hinton 267A"). In further support of the Sunrise Counterproposal, this section determines the population which is predicted

[3] Various FM and AM stations which serve the gain area may have been excluded from the study if their coverage of the gain area is completely served by at least five other included FM and AM stations. For example, there are no non-Class A AM stations whose nighttime interference-free contours provide service to the gain area which is not also served by five other listed fulltime aural services.

[4] Figure 6 demonstrates that there are two other extremely small underserved areas (in addition to the larger underserved area shown on Figure 5). These two smaller areas are each less than one square kilometer in size, and contain no population.

tobe served by the Hinton 267A facility, and compares it to the previously-determined population which is predicted for the Whiting 267C2 and Underwood 268A facilities.

8. Figure 7, attached, includes a tabulation of the predicted 60 and 70 dBu F(50,50) service contour distances for a maximum FM Class A omnidirectional transmit facility which is located at the Hinton reference site[5] (hereafter referred to as the "Hinton Coverage"). Figures 8A and 8B, attached, are population counts for the Hinton Coverage, which show the 1990 U.S. Census population located within the 70 and 60 dBu service contours, respectively. Figures 8A and 8B demonstrate the following:

(a) That 72,982 persons are located within the 70 dBu service contour;

(b) That 124,982 persons are located within the 60 dBu service contour;

(c) That the 1990 population of Hinton is 697 persons.

9. As mentioned above, Sunrise's May 10th filing includes similar population data for the Whiting 267C2 and Underwood 268A counterproposal facilities of Sunrise.

[5] The FCC-designated reference site for Hinton 267A is located at coordinates N 42° 36' 43"; W 96° 17' 29" (NAD-27).

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KISP(FM) Support for Reallotment to Whiting, IA Channel 267C2

As a comparison of the Hinton 267A proposal with that of the Sunrise Counterproposal, the following table is provided:

Proposed Facility	1990 U.S. Census Population Predicted For the 60 dBu (F50,50) Service Contour
Hinton 267A	124,547 persons
TOTAL FOR HINTON PROPOSAL:	124,547 persons
Whiting 267C2	150,970 persons
Underwood 268A	69,984 persons
TOTAL FOR SUNRISE COUNTERPROPOSAL:	220,954 persons

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FIGURE 1: WHITING, IA CHANNEL 267C2 COVERAGE

Facilities:	Maximum Class C2
Coordinates (Reference Site):	N 42° 16' 20"; W 96° 02' 27" (NAD 27)
ERP (max):	50 kw (17.0 dBk)
Antenna Type:	omnidirectional
Radiation Center Hgt.:	502.8 meters AMSL 150.0 meters AAT

Bearing	HAAT	Distance to F(50,50) Contours	
(deg T)	(m)	70 dBu (km)	60 dBu (km)
0	134	30.8	49.9
45	134	30.8	49.9
90	126	30.1	48.9
135	136	31.1	50.3
180	178	35.6	55.4
209+	179	35.6	55.5
225	179	35.6	55.5
270	177	35.4	55.3
315	136	31.0	50.2

+ extra radial through Whiting, IA; not included in average

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KISP(FM) Support for Reallotment to Whiting, IA Channel 267C2

FIGURE 2: KISP(FM), BLAIR, NE CHANNEL 268C3 AUTHORIZED COVERAGE

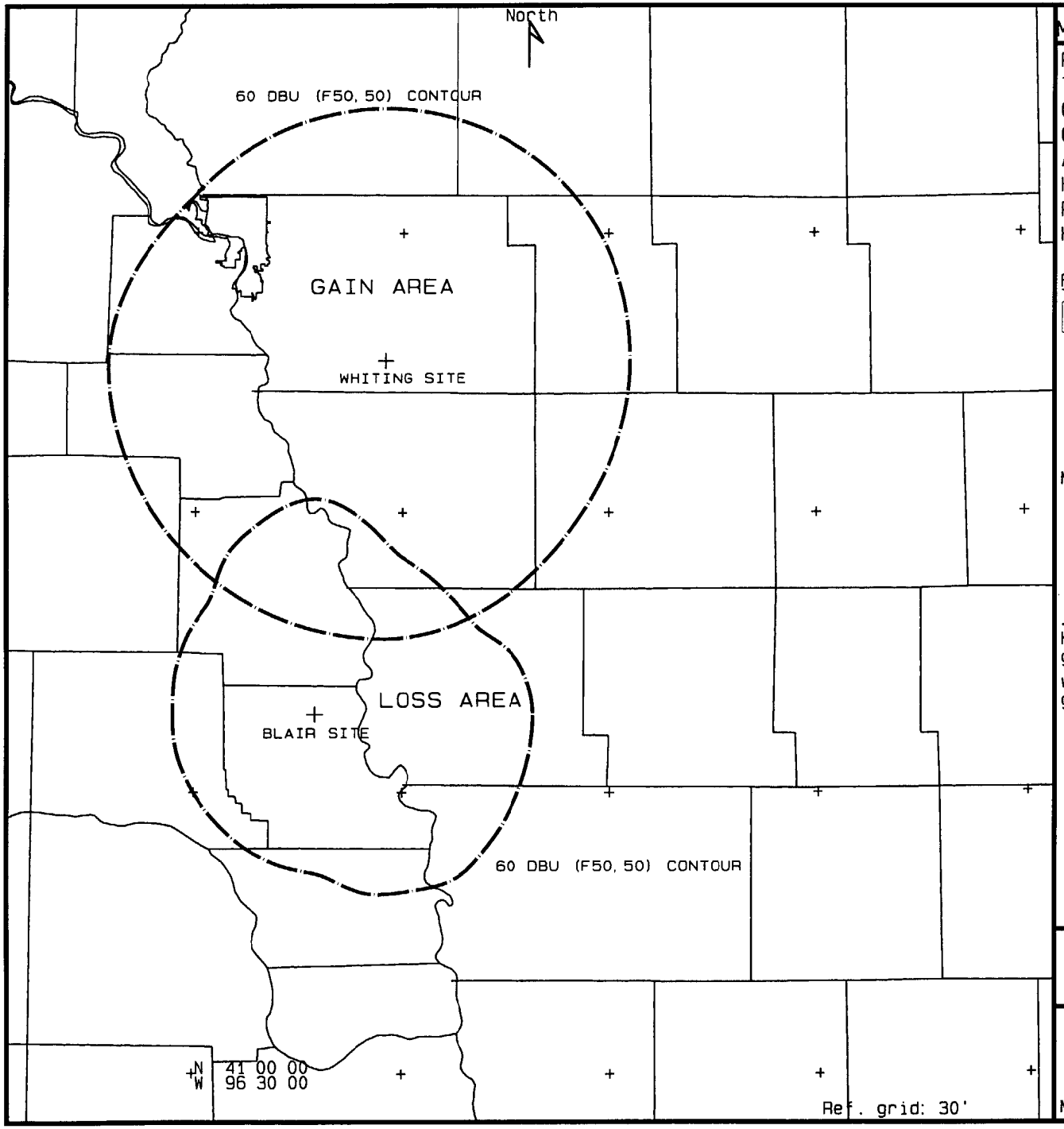
Facilities: Authorized Class C3 (BPH-930916IC)
Coordinates: N 41° 38' 21"; W 96° 12' 31" (NAD 27)

ERP (max): 25.0 kw (13.98 dBk)
Antenna Type: directional (Shively 6810-6)

Radiation Center Hgt.: 435.8 meters AMSL
91.9 meters AAT

Bearing (deg T)	HAAT (m)	ERP (kW)	Distance to F(50,50) Contours 70 dBu (km)	60 dBu (km)
0	124.8*	25.00	25.4	42.8
15	125.5	16.41	23.3	39.3
30	126.3	9.98	20.8	35.6
45	127.0*	9.98	20.9	35.7
60	128.3	10.89	21.5	36.5
75	129.5	20.23	24.8	41.8
90	130.8*	25.00	26.1	43.6
105	130.2	25.00	26.0	43.5
120	129.6	25.00	25.9	43.4
135	129.0*	25.00	25.9	43.4
150	106.8	25.00	24.1	40.2
151	100.3+	25.00	23.2	39.4
165	84.5	25.00	21.2	36.5
180	62.3*	25.00	18.3	31.5
195	59.0	25.00	17.7	30.6
210	55.6	25.00	17.1	29.8
225	52.3*	25.00	16.7	29.0
240	51.6	25.00	16.6	28.8
255	51.0	25.00	16.5	28.7
270	50.3*	25.00	16.3	28.5
285	53.2	25.00	16.8	29.1
300	56.2	25.00	17.2	29.9
315	59.1*	25.00	17.7	30.6
330	81.0	25.00	20.9	35.9
345	102.9	25.00	23.5	39.9

* - radial used for average
+ - extra radial through Blair, NE



MSITE (tm) : MAP\BLAIR.MAP

Propagation model: FCC-FCC
Time: 50.00% Loc: 50.00% Margin: .0 dB
Climate: Continental Temperate
Gndcvr: None
Atm. factor: None
K Factor: 1.333
RX Antenna: DA-pat\mmds.pat
Height: 9.1 mtrs AGL Gain: 17.9 dBd

Field strength (at remote)

60.0 dBuV/m

Minimum threshold level: -199.0 dBmW

Site	Ant Elv AMSL (mtrs)	ERPd (dBW)	Ant. Type /Orient.	Coordinates
KISP-CP	435.8	43.98	DA-H	N 41 38 21.00
grp: 1	101.5000 MHz		.0	W 96 12 31.00
whitC2 *	502.8	46.99	OM-H	N 42 16 20.00
grp: 1	101.3000 MHz			W 96 2 27.00

KILOMETERS
20 0 20 40 60

KISP (FM) COVERAGE

WHITING 267C2 AND BLAIR 268C3

MAY 1999 FIGURE 3

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FIGURE 4

OTHER FULLTIME AURAL STATIONS SERVING WHITING 267C2 GAIN AREA

COMMERCIAL FM STATIONS (60 dBu Service Contours are used)

Call Sign	Stat.	City, State	Channel	FIG. 5 ID #	FIG. 6 ID #
KEZO(FM)	LIC	Omaha, NE	222C	1	1
KKIA(FM)	CP	Ida Grove, IA	225C3	2	2
KKRL(FM)	LIC	Carroll, IA	229C1	3	3
WOW-FM	LIC	Omaha, NE	231C	4	4
KGLI(FM)	LIC	Sioux City, IA	238C1	5	5
KSEZ(FM)	LIC	Sioux City, IA	250C1	6	6
KQKQ-FM	LIC	Council Bluffs, IA	253C	7	7
KKMA(FM)	LIC	Le Mars, IA	258C1	8	8
KGOR(FM)	LIC	Omaha, NE	260C	9	9
KAYL-FM	LIC	Storm Lake, IA	269C1	10	10
KZSR(FM)	LIC	Onawa, IA	272C1	11	11
KTFC(FM)	LIC	Sioux City, IA	277C1	12	12
KXKT(FM)	LIC	Glenwood, IA	279C	13	13
KSRZ(FM)	LIC	Omaha, NE	283C	14	14
KDSN-FM	LIC	Denison, IA	296A	15	15
KMAP-FM	CP	Castana, IA	298C3	16	16

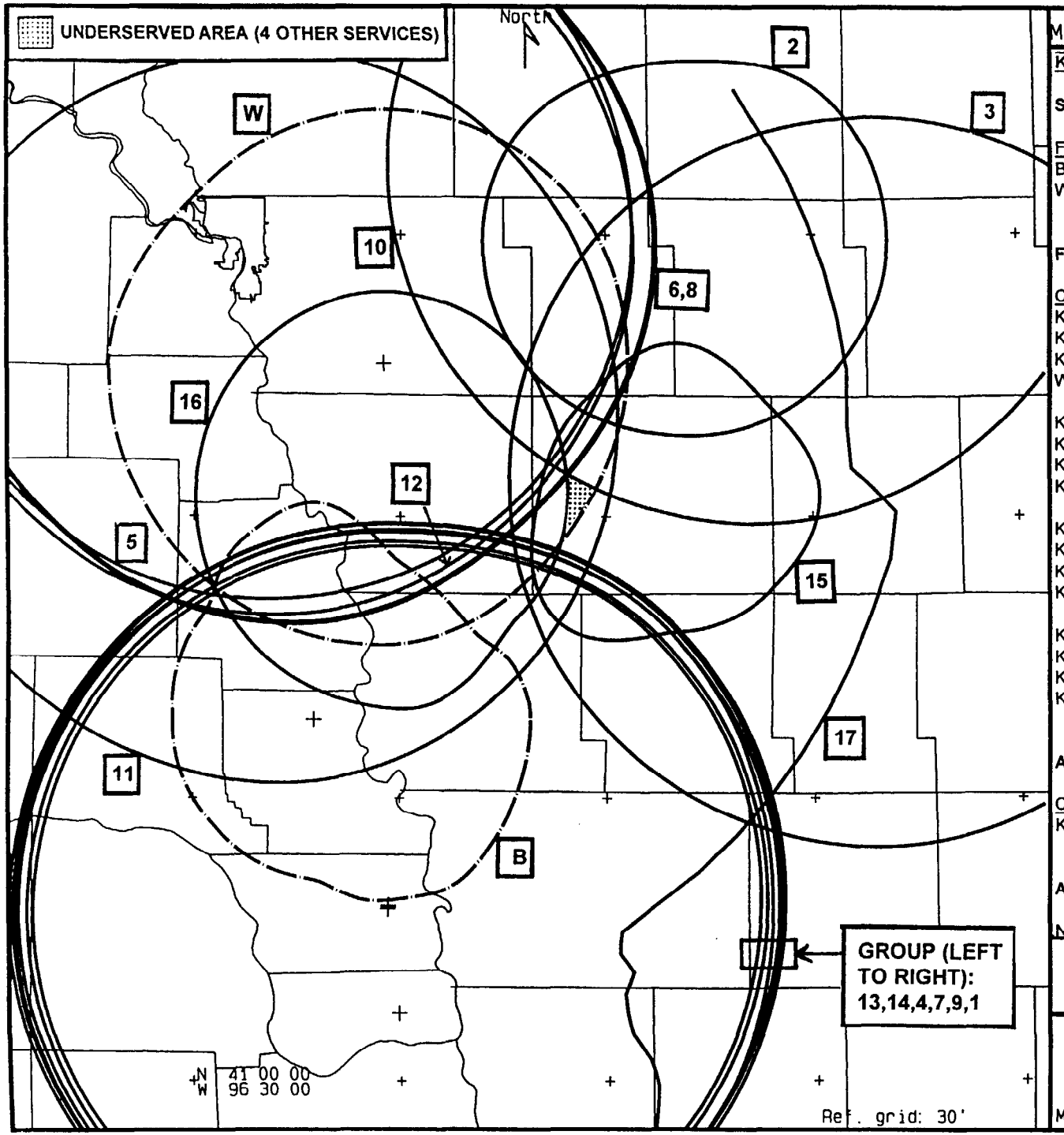
AM CLASS A STATIONS (0.5 mV/m Groundwave Contours are used*)

Call Sign	Stat.	City, State	Freq/Class	FIG. 5 ID #	FIG. 6 ID #
KFAB(AM)	LIC	Omaha, NE	1110 kHz/A	17	not shown

(Note: The smaller nighttime GW contour is used;
Both contours will completely cover loss area.)

AM NON-CLASS A STATIONS (Nighttime Interference-Free Contours are used)

NONE WITHIN UNDERSERVED AREA



MSITE (tm) : MAP\BLAIR.MAP

KEY

SUNRISE FACILITIES (60 dBu Service Contours)

Facility	ID #
Blair 268C3	B
Whiting 267C2	W

FM STATIONS (60 dBu Service Contours)

Call Sign, Status	ID #
KEZO(FM), LIC	1
KKIA(FM), CP	2
KKRL(FM), LIC	3
WOW-FM, LIC	4
KGLI(FM), LIC	5
KSEZ(FM), LIC	6
KQKQ-FM, LIC	7
KKMA(FM), LIC	8
KGOR(FM), LIC	9
KAYL-FM, LIC	10
KZSR(FM), LIC	11
KTFC(FM), LIC	12
KXKT(FM), LIC	13
KSRZ(FM), LIC	14
KDSN-FM, LIC	15
KMAP-FM, CP	16

AM CLASS A STATIONS (0.5 mV/m Contours)

Call Sign, Status	ID #
KFAB(AM), LIC	17

AM NON-CLASS A STATIONS (Night-Limit Contours)

NONE WITHIN UNDERSERVED AREA

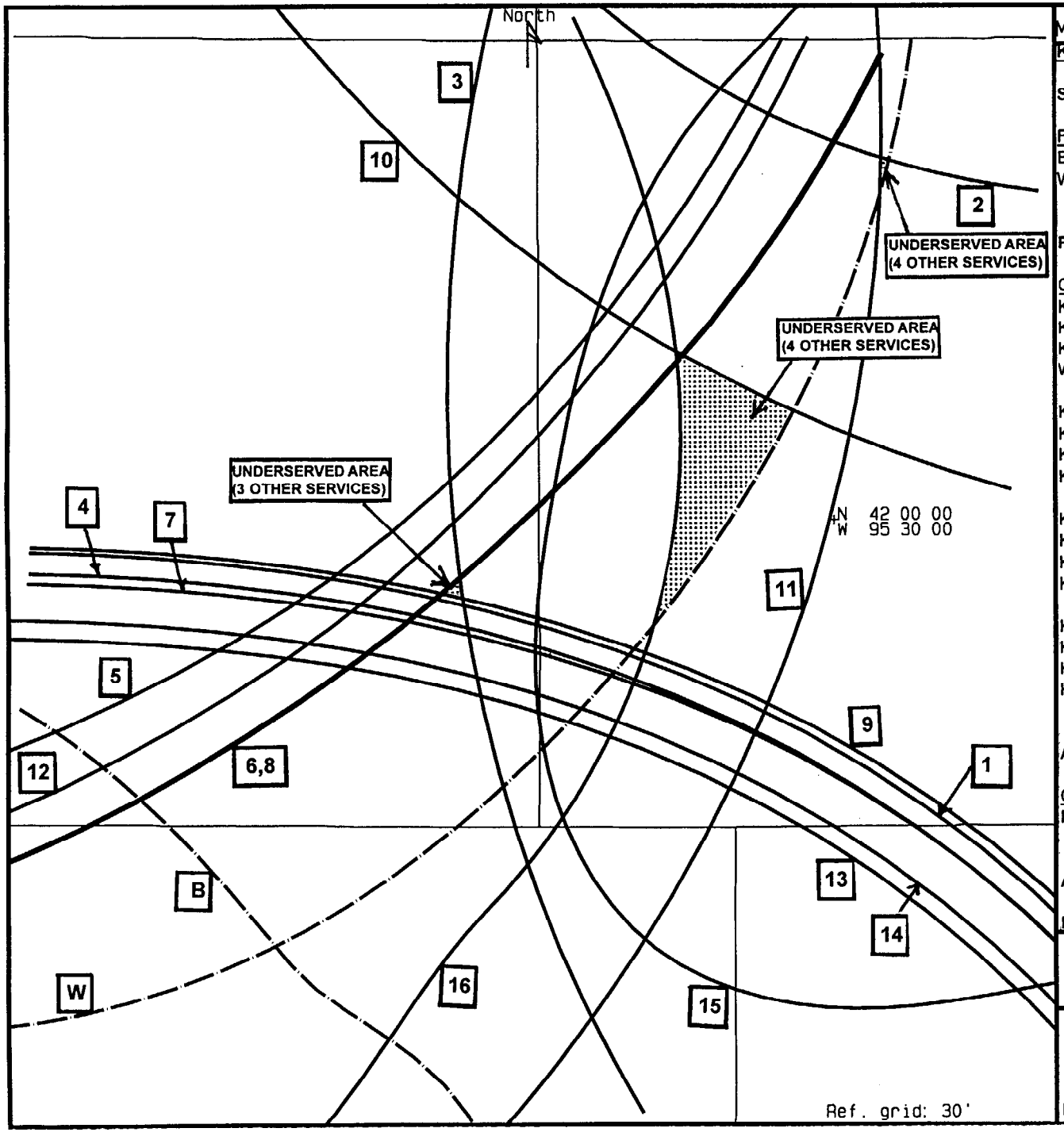
KILOMETERS

20 0 20 40 60

WHITING, IA 267C2

GAIN AREA--OTHER SERVICES MAP

MAY 1999 FIGURE 5



MSITE (tm) : MAP\BLAIR.MAP

KEY

SUNRISE FACILITIES (60 dBu Service Contours)

Facility	ID #
Blair 268C3	B
Whiting 267C2	W

FM STATIONS (60 dBu Service Contours)

Call Sign, Status	ID #
KEZO(FM), LIC	1
KKIA(FM), CP	2
KKRL(FM), LIC	3
WOW-FM, LIC	4
KGLI(FM), LIC	5
KSEZ(FM), LIC	6
KQKQ-FM, LIC	7
KKMA(FM), LIC	8
KGOR(FM), LIC	9
KAYL-FM, LIC	10
KZSR(FM), LIC	11
KTFC(FM), LIC	12
KXKT(FM), LIC	13
KSRZ(FM), LIC	14
KDSN-FM, LIC	15
KMAP-FM, CP	16

AM CLASS A STATIONS (0.5 mV/m Contours)

Call Sign, Status	ID #
KFAB(AM), LIC (NOT SHOWN; COMPLETEDLY (COVERS MAGNIFIED AREA)	

AM NON-CLASS A STATIONS (Night-Limit Contours)

NONE WITHIN UNDERSERVED AREA

KILOMETERS

5 0 5 10 15

WHITING, IA 267C2

GAIN AREA--OTHER SERVICES MAP

MAGNIFIED FIGURE 6

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FIGURE 7: HINTON, IA CHANNEL 267A COVERAGE

Facilities: Maximum Class A
Coordinates (Reference Site): N 42° 36' 43"; W 96° 17' 29" (NAD 27)

ERP (max): 6 kw (7.78 dBk)
Antenna Type: omnidirectional

Radiation Center Hgt.: 100.0 meters AAT

Bearing (deg T)	HAAT (m)	Distance to F(50,50) Contours 70 dBu (km)	60 dBu (km)
0	102	16.4	28.6
45	101	16.3	28.5
90	93	15.5	27.4
135	112	17.2	29.8
180	103	16.4	28.7
225	120	17.9	30.8
270	90	15.2	26.8
315	78	14.1	25.2

FIGURE 8A: HINTON 267A 70 DBU (F50,50) COVERAGE POPULATION COUNT (1990 U.S. CENSUS)

State, County, City	Households	TOTAL POPULATION						
		White	Hispanic	Black	Am Indian	Asian	Other	Total
Iowa	28,994	65,340	2,466	1,741	1,341	1,112	70	72,070
Nebraska	394	710	95	9	59	22	17	912
TOTAL	**29,388**							**72,982**
Iowa Counties:								
Plymouth County								
Hinton city	255	687	2	4	0	4	0	697
Merrill city	277	718	8	0	0	3	0	729
Rural county	1,037	2,985	10	4	5	6	0	3,010
Total for County	1,569	4,390	20	8	5	13	0	4,436
Woodbury County								
Lawton city	1	3	0	0	0	0	0	3
Sioux City city	26,959	59,653	2,444	1,733	1,332	1,098	70	66,330
Rural county	465	1,294	2	0	4	1	0	1,301
Total for County	27,425	60,950	2,446	1,733	1,336	1,099	70	67,634
Nebraska Counties:								
Dakota County								
South Sioux City cit	394	710	95	9	59	22	17	912
Total for County	394	710	95	9	59	22	17	912

FIGURE 8B: HINTON 267A 60 DBU (F50,50) COVERAGE POPULATION COUNT (1990 U.S. CENSUS)

State, County, City	Households	TOTAL POPULATION						
		White	Hispanic	Black	Am Indian	Asian	Other	Total
Iowa	41,801	99,253	2,737	1,873	1,468	1,266	75	106,672
Nebraska	5,525	12,573	1,009	74	280	334	26	14,296
South Dakota	1,453	3,499	43	12	12	12	1	3,579
TOTAL	**48,779**							**124,547**
Iowa Counties:								
Plymouth County								
Brunsville city	57	135	0	0	0	2	0	137
Hinton city	255	687	2	4	0	4	0	697
Kingsley city	497	1,122	1	2	2	2	0	1,129
Le Mars city	3,280	8,367	27	32	2	23	3	8,454
Merrill city	277	718	8	0	0	3	0	729
Rural county	2,030	5,953	11	7	6	11	1	5,989
Total for County	6,396	16,982	49	45	10	45	4	17,135
Woodbury County								
Bronson city	88	205	0	1	3	0	0	209
Lawton city	190	482	0	0	0	0	0	482
Moville city	569	1,293	11	0	2	0	0	1,306
Sergeant Bluff city	922	2,648	37	16	27	44	0	2,772
Sioux City city	32,172	73,425	2,624	1,807	1,412	1,166	71	80,505
Rural county	1,464	4,218	16	4	14	11	0	4,263
Total for County	35,405	82,271	2,688	1,828	1,458	1,221	71	89,537
Nebraska Counties:								
Dakota County								
Dakota City city	510	1,247	145	9	27	39	3	1,470
Jackson village	96	225	5	0	0	0	0	230
South Sioux City cit	3,816	8,704	545	62	229	115	22	9,677
Rural county	1,103	2,397	314	3	24	180	1	2,919
Total for County	5,525	12,573	1,009	74	280	334	26	14,296
South Dakota Counties:								
Union County								
Jefferson city	220	520	3	0	4	0	0	527
North Sioux City cit	795	1,957	31	12	7	11	1	2,019
Rural county	438	1,022	9	0	1	1	0	1,033
Total for County	1,453	3,499	43	12	12	12	1	3,579

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APPENDIX A (PAGE 1 OF 17): KEZO(FM) SERVICE TO GAIN AREA

KEZO(FM), Omaha, Nebraska (222C), Licensed

Facilities:	Minor Change (BPH-971126IE)*
Coordinates:	N 41° 18' 40"; W 96° 01' 37" (NAD 27)
ERP (max):	100 kw (20.0 dBk)
Antenna Type:	omnidirectional
Radiation Center Hgt.:	343.0 meters AGL
	706.0 meters AMSL
	365.0 meters AAT

BPH-971126IE facilities used for study.

* NOTE: A minor change application (BPH-971126IE) is pending to lower the antenna height. Because the proposed changes are minor and result in a slight decrease in coverage from that of the licensed facility, the mod. facilities are used.

Bearing (deg T)	HAAT (m)	Distance to F(50,50) 60 dBu Contour (km)
0	337	75.1
45	393	79.2
90	386	78.8
135	370	77.6
180	378	78.1
225	365	77.2
270	352	76.2
315	339	75.3

Note: All above HAAT and contour distances were taken from FCC station files (FCC Form 301). The reported distances were checked and are deemed accurate within one km.

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APPENDIX A (PAGE 2 OF 17): KKIA(FM) SERVICE TO GAIN AREA

KKIA(FM), Ida Grove, Iowa (225C3), Authorized

Facilities:	CP
Coordinates:	N 42° 29' 23"; W 95° 17' 40" (NAD 27)
ERP (max):	25 kw (13.98 dBk)
Antenna Type:	omnidirectional
Radiation Center Hgt.:	100.0 meters AAT

Maximum Class C3 facilities used for study.

Bearing (deg T)	HAAT (m)	Distance to F(50,50) 60 dBu Contour (km)
0	80	35.3
45	101	39.2
90	102	39.4
135	97	38.6
180	97	38.6
225	110	40.6
270	114	41.3
315	98	38.8

Note: All above HAAT values were taken from USGS 3 arc-second terrain database.

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APPENDIX A (PAGE 3 OF 17): KKRL(FM) SERVICE TO GAIN AREA

KKRL(FM), Carroll, Iowa (229C1), Licensed

Facilities:	Licensed
Coordinates:	N 42° 3' 14"; W 94° 53' 6" (NAD 27)
ERP (max):	100 kw (20.0 dBk)
Antenna Type:	omnidirectional
Radiation Center Hgt.:	299.0 meters AAT

Maximum Class C1 facilities used for study.

Bearing (deg T)	HAAT (m)	Distance to F(50,50) 60 dBu Contour (km)
0	301	72.5
45	324	74.2
90	331	74.6
135	316	73.5
180	285	71.2
225	272	70.1
270	271	70.0
315	293	71.8

Note: All above HAAT values were taken from USGS 3 arc-second terrain database.

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APPENDIX A (PAGE 4 OF 17): WOW-FM SERVICE TO GAIN AREA

WOW-FM, Omaha, Nebraska (231C), Licensed

Facilities:	Licensed
Coordinates:	N 41° 18' 16"; W 96° 01' 41" (NAD 27)
ERP (max):	100 kw (20.0 dBk)
Antenna Type:	omnidirectional
Radiation Center Hgt.:	338.0 meters AGL
	702.0 meters AMSL
	361.0 meters AAT

Licensed facilities used for study.

Bearing (deg T)	HAAT (m)	Distance to F(50,50) 60 dBu Contour (km)
0	330	74.3
45	391	78.8
90	385	78.4
135	366	76.9
180	374	77.5
225	359	76.4
270	347	75.6
315	339	75.0

Note: All above HAAT and contour distances were taken from FCC station files (FCC Form 301). The reported distances were checked and are deemed accurate within one km.

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APPENDIX A (PAGE 5 OF 17): KGLI(FM) SERVICE TO GAIN AREA

KGLI(FM), Sioux City, Iowa (238C1), Licensed

Facilities:	Licensed
Coordinates:	N 42° 30' 53"; W 96° 18' 13" (NAD 27)
ERP (max):	100 kw (20.0 dBk)
Antenna Type:	omnidirectional
Radiation Center Hgt.:	299.0 meters AAT

Maximum Class C1 facilities used for study.

Bearing (deg T)	HAAT (m)	Distance to F(50,50) 60 dBu Contour (km)
0	298	72.2
45	278	70.6
90	284	71.1
135	300	72.4
180	314	73.4
225	323	74.1
270	310	73.1
315	284	71.1

Note: All above HAAT values were taken from USGS 3 arc-second terrain database.

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APPENDIX A (PAGE 6 OF 17): KSEZ(FM) SERVICE TO GAIN AREA

KSEZ(FM), Sioux City, Iowa (250C1), Licensed

Facilities:	Licensed
Coordinates:	N 42° 28' 56"; W 96° 15' 30" (NAD 27)
ERP (max):	100 kw (20.0 dBk)
Antenna Type:	omnidirectional
Radiation Center Hgt.:	299.0 meters AAT

Maximum Class C1 facilities used for study.

Bearing (deg T)	HAAT (m)	Distance to F(50,50) 60 dBu Contour (km)
0	280	70.8
45	278	70.6
90	297	72.2
135	287	71.3
180	331	74.7
225	317	73.6
270	312	73.3
315	289	71.5

Note: All above HAAT values were taken from USGS 3 arc-second terrain database.

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APPENDIX A (PAGE 7 OF 17): KQKQ-FM SERVICE TO GAIN AREA

KQKQ-FM, Council Bluffs, Iowa (253C), Licensed

Facilities:	Licensed
Coordinates:	N 41° 18' 25"; W 96° 01' 37" (NAD 27)
ERP (max):	100 kw (20.0 dBk)
Antenna Type:	omnidirectional
Radiation Center Hgt.:	335.0 meters AGL
	702.0 meters AMSL
	358.0 meters AAT

Licensed facilities used for study.

Bearing (deg T)	HAAT (m)	Distance to F(50,50) 60 dBu Contour (km)
0	332	74.5
45	385	78.5
90	380	77.0
135	361	77.5
180	370	76.5
225	357	75.5
270	345	75.0
315	336	74.4

Note: All above HAAT and contour distances were taken from FCC station files (FCC Form 301), except for radial 315° (which was left blank on the application). The distance along the 315° radial was determined by us. The other reported distances were checked and are deemed accurate within one km.

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APPENDIX A (PAGE 8 OF 17): KKMA(FM) SERVICE TO GAIN AREA

KKMA(FM), Le Mars, Iowa (258C1), Licensed

Facilities:	Licensed
Coordinates:	N 42° 28' 56"; W 96° 15' 30" (NAD 27)
ERP (max):	100 kw (20.0 dBk)
Antenna Type:	omnidirectional
Radiation Center Hgt.:	299.0 meters AAT

Maximum Class C1 facilities used for study.

Bearing (deg T)	HAAT (m)	Distance to F(50,50) 60 dBu Contour (km)
0	280	70.8
45	278	70.6
90	297	72.2
135	287	71.3
180	331	74.7
225	317	73.6
270	312	73.3
315	289	71.5

Note: All above HAAT values were taken from USGS 3 arc-second terrain database.

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APPENDIX A (PAGE 9 OF 17): KGOR(FM) SERVICE TO GAIN AREA

KGOR(FM), Omaha, Nebraska (260C), Licensed

Facilities:	Licensed
Coordinates:	N 41° 47' 06"; W 96° 40' 39" (NAD 27)
ERP (max):	50 kw (17.0 dBk)
Antenna Type:	omnidirectional
Radiation Center Hgt.:	352.0 meters AGL
	719.0 meters AMSL
	375.0 meters AAT

Licensed facilities used for study.

Bearing (deg T)	HAAT (m)	Distance to F(50,50) 60 dBu Contour (km)
0	347	75.8
45	405	80.1
90	396	79.5
135	380	78.3
180	386	78.7
225	374	77.8
270	362	77.0
315	350	76.1

Note: All above HAAT values were taken from USGS 3 arc-second terrain database.

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APPENDIX A (PAGE 10 OF 17): KAYL-FM SERVICE TO GAIN AREA

KAYL-FM, Storm Lake, Iowa (269C1), Licensed

Facilities:	Licensed
Coordinates:	N 42° 38' 5"; W 95° 10' 10" (NAD 27)
ERP (max):	100 kw (20.0 dBk)
Antenna Type:	omnidirectional
Radiation Center Hgt.:	299.0 meters AAT

Maximum Class C1 facilities used for study.

Bearing (deg T)	HAAT (m)	Distance to F(50,50) 60 dBu Contour (km)
0	301	72.5
45	323	74.1
90	323	74.1
135	314	73.4
180	295	72.0
225	284	71.1
270	279	70.7
315	272	70.1

Note: All above HAAT values were taken from USGS 3 arc-second terrain database.

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APPENDIX A (PAGE 11 OF 17): KZSR(FM) SERVICE TO GAIN AREA

KZSR(FM), Onawa, Iowa (272C1), Licensed

Facilities:	Licensed
Coordinates:	N 40° 10' 29"; W 96° 23' 13" (NAD 27)
ERP (max):	100 kw (20.0 dBk)
Antenna Type:	omnidirectional
Radiation Center Hgt.:	299.0 meters AAT

Maximum Class C1 facilities used for study.

Bearing (deg T)	HAAT (m)	Distance to F(50,50) 60 dBu Contour (km)
0	294	71.9
45	339	75.3
90	342	75.5
135	338	75.2
180	292	71.7
225	255	68.7
270	262	69.2
315	269	69.8

Note: All above HAAT values were taken from USGS 3 arc-second terrain database.

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APPENDIX A (PAGE 12 OF 17): KTFC(FM) SERVICE TO GAIN AREA

KTFC(FM), Sioux City, Iowa (277C1), Licensed

Facilities:	Licensed
Coordinates:	N 42° 29' 26"; W 96° 18' 21" (NAD 27)
ERP (max):	100 kw (20.0 dBk)
Antenna Type:	omnidirectional
Radiation Center Hgt.:	299.0 meters AAT

Maximum Class C1 facilities used for study.

Bearing (deg T)	HAAT (m)	Distance to F(50,50) 60 dBu Contour (km)
0	288	71.4
45	275	70.3
90	289	71.5
135	298	72.2
180	319	73.8
225	319	73.8
270	325	74.2
315	279	70.6

Note: All above HAAT values were taken from USGS 3 arc-second terrain database.

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APPENDIX A (PAGE 13 OF 17): KXKT(FM) SERVICE TO GAIN AREA

KXKT(FM), Glenwood, Iowa (279C), Licensed

Facilities:	Licensed
Coordinates:	N 41° 18' 40"; W 96° 01' 37" (NAD 27)
ERP (max):	100 kw (20.0 dBk)
Antenna Type:	omnidirectional
Radiation Center Hgt.:	287.0 meters AGL
	650.0 meters AMSL
	309.0 meters AAT

Licensed facilities used for study.

Bearing (deg T)	HAAT (m)	Distance to F(50,50) 60 dBu Contour (km)
0	280.3	70.8
45	336.4	75.1
90	330.2	74.6
135	313.6	73.4
180	321.2	74.0
225	308.7	73.0
270	295.6	72.0
315	282.4	71.0
140.7	310.1	73.1

Note: All above HAAT and contour distances were taken from FCC station files (FCC Form 301). The reported distances were checked and are deemed accurate within one km.

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APPENDIX A (PAGE 14 OF 17): KSRZ(FM) SERVICE TO GAIN AREA

KSRZ(FM), Omaha, Nebraska (283C), Licensed

Facilities:	Licensed
Coordinates:	N 41° 18' 25"; W 96° 01' 37" (NAD 27)
ERP (max):	100 kw (20.0 dBk)
Antenna Type:	omnidirectional
Radiation Center Hgt.:	307.0 meters AGL
	674.0 meters AMSL
	331.0 meters AAT

Licensed facilities used for study.

Bearing (deg T)	HAAT (m)	Distance to F(50,50) 60 dBu Contour (km)
0	304.2	72.2
45	357.3	76.3
90	352.1	75.9
135	333.5	74.5
180	342.6	75.1
225	329.5	74.2
270	317.3	73.2
315	308.5	72.6

Note: All above HAAT and contour distances were taken from FCC station files (FCC Form 301). The reported distances were checked and are deemed accurate within one km.

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APPENDIX A (PAGE 15 OF 17): KDSN-FM SERVICE TO GAIN AREA

KDSN-FM, Denison, Iowa (296A), Licensed

Facilities:	Licensed
Coordinates:	N 41° 37' 0"; W 95° 16' 10" (NAD 27)
ERP (max):	6 kw (7.78 dBk)
Antenna Type:	omnidirectional
Radiation Center Hgt.:	100.0 meters AAT

Maximum Class A facilities used for study.

Bearing (deg T)	HAAT (m)	Distance to F(50,50) 60 dBu Contour (km)
0	115	30.2
45	81	25.6
90	103	28.7
135	86	26.3
180	87	26.6
225	150	34.1
270	94	27.4
315	85	26.1

Note: All above HAAT values were taken from USGS 3 arc-second terrain database.

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APPENDIX A (PAGE 16 OF 17): KMAP-FM SERVICE TO GAIN AREA

KMAP-FM, Castana, Iowa (298C3), Authorized

Facilities:	CP
Coordinates:	N 42° 2' 5"; W 95° 59' 21" (NAD 27)
ERP (max):	25 kw (13.98 dBk)
Antenna Type:	omnidirectional
Radiation Center Hgt.:	100.0 meters AAT

Maximum Class C3 facilities used for study.

Bearing (deg T)	HAAT (m)	Distance to F(50,50) 60 dBu Contour (km)
0	108	40.3
45	81	35.6
90	68	32.8
135	67	32.7
180	119	41.9
225	119	41.9
270	119	41.9
315	118	41.8

Note: All above HAAT values were taken from USGS 3 arc-second terrain database.

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APPENDIX A (PAGE 17 OF 17): KFAB(AM) SERVICE TO GAIN AREA

KFAB(AM), Omaha, Nebraska (1110 kHz, Class A), Licensed DA-N

Facilities:	Licensed Night
Coordinates:	N 41° 7' 11"; W 96° 0' 6" (NAD 27)
Power:	50 kw
Number of Towers:	3

Tower Information

Twr #	Field Ratio	Phase (deg)	Spacing (deg)	Bearing (deg)	Hgt. (deg)
1	0.500	290.0	0.0	0.0	176.7
2	1.000	0.0	120.0	106.0	176.7
3	0.500	70.0	240.0	106.0	176.7

Augmentation Information

Az. (°T)	Span (deg)	Rad.(mV/m @ 1 km)	Az. (°T)	Span (deg)	Rad.(mV/m @ 1 km)	Az. (°T)	Span (deg)	Rad.(mV/m @ 1 km)
0.0	40.0	4181.88	78.0	10.0	72.42	124.0	10.0	82.08
15.0	30.0	3178.45	109.0	10.0	73.23	129.0	10.0	83.69
30.0	60.0	1911.42	114.0	10.0	75.64			
68.0	20.0	88.51	119.0	10.0	78.86			

Contour Distance Calculations

Azim. (°T)	Radiation (mV/m @1 km)	Conductivity (to) Distance	Distance to 0.5 mV/m Contour (km)
315.0	4101.72	σ15 out	238.7
320.0	4216.39	σ15 241.6km; σ30 out	240.8
325.0	4349.62	σ15 232.9km; σ30 out	245.3
330.0	4498.80	σ15* 29.8km; σ15 223.9; σ30 out	250.3
335.0	4618.24	σ15* 29.8km; σ15 210.8; σ30 out	255.8
340.0	4666.29	σ15* 29.8km; σ15 195.7; σ30 out	260.6
345.0	4637.59	σ15* 29.8km; σ15 195.7; σ30 out	260.0
350.0	4544.06	σ8* 32.0km; σ15 218.2; σ30 228.4; σ15 out	236.0
355.0	4389.35	σ8* 32.0km; σ15 out	231.6
0.0	4181.88	σ8* 32.0km; σ15 out	228.0
5.0	3914.25	σ8* 32.0km; σ15 256.6; σ30 out	223.1
10.0	3576.57	σ8* 32.0km; σ15 240.3; σ30 out	216.4
15.0	3181.52	σ15 224.3km; σ30 out	220.1
20.0	2759.13	σ7* 32.3km; σ15 211.4; σ30 out	194.1
25.0	2328.57	σ7* 32.3km; σ15 208.5; σ30 out	182.5
30.0	1911.42	σ7* 32.3km; σ15 215.7; σ30 out	169.6
35.0	1530.83	σ7* 32.3km; σ15 231.9; σ30 out	155.8
40.0	1181.95	σ7* 32.3km; σ15 out	140.8
45.0	874.33	σ15 out	123.2

NOTES
Only pertinent azimuths over area are shown.

* - measured conductivity used.

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DeLawder, declare and state as follows:

That I have received a Bachelor of Science degree in electrical engineering from Villanova University;

That I have either prepared or directly supervised the preparation of all technical information contained in this Engineering Supplement;

That the facts stated in this Engineering Supplement are true of my own knowledge, except as to such statements as are herein stated to be on information and belief, and as to such statements I believe them to be true.

05-14-99
Date

Darryl K. DeLawder

CERTIFICATE OF SERVICE

I, Harold K. McCombs, do hereby certify that I have caused to be served, by First Class Mail, postage pre-paid, this 17th day of May, 1999, a copy of the foregoing "Supplement to Comments and Counter-Proposal" upon the following person:

Victor A. Michael, Jr., President
Mountain West Broadcasting
6807 Foxglove Drive
Cheyenne, Wyoming 82009

Harold K. McCombs

Harold K. McCombs, Jr.